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June 5, 1995

Dr. Louis Goodman, Code 322 PO
Office of Naval Research
800 North Quincy Street BCT #1
Arlington VA 22217-5660

ONR Grant Nos. N00014-90-J-1037
OSU Account Nos. 30-262-3084

Dear Dr. Goodman:

In order to complete my ONR grant entitled "Air-Sea Interaction (Ocean Storms)." I am sending three copies of the Final Technical Report to you with copies distributed as indicated below.

Sincerely,

Clayton A. Paulson

Clayton A. Paulson

c: Defense Technical Information Center (2 copies)
Bldg. 5 Cameron Station
Alexandria, VA 22304-6145

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Office of Naval Research
Seattle Regional Office
1107 NE 45th Street, Suite 350
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IN REPLY REFER TO:

4330
ONR 247
11 Jul 97

From: Director, Office of Naval Research, Seattle Regional Office, 1107 NE 45th St., Suite 350, Seattle, WA 98105
To: Defense Technical Center, Attn: P. Mawby, 8725 John J. Kingman Rd., Suite 0944, Ft. Belvoir, VA 22060-6218

Subj: RETURNED GRANTEE/CONTRACTOR TECHNICAL REPORTS

1. This confirms our conversations of 27 Feb 97 and 11 Jul 97. Enclosed are a number of technical reports which were returned to our agency for lack of clear distribution availability statement. This confirms that all reports are unclassified and are "APPROVED FOR PUBLIC RELEASE" with no restrictions.

2. Please contact me if you require additional information. My e-mail is *silverr@onr.navy.mil* and my phone is (206) 625-3196.

ROBERT J. SILVERMAN

FINAL TECHNICAL REPORT

ONR GRANT NO. N00014-90-J-1037

PI: Clayton A. Paulson
TITLE: Air-Sea Interaction (Ocean Storms)

The main objective of this project was to analyze the observations we obtained during the Ocean Storms experiment. As part of the Ocean Storms experiment, a mooring was deployed for ten months near the center of the Ocean Storms array (47N, 137W) in the Northeast Pacific. The subsurface mooring had 14 current meters and seven temperature/conductivity sensors distributed between 60 and 4000 m depth. The observations showed: 1) energetic storm-generated inertial oscillations in the surface mixed layer; 2) propagation, on weekly time-scales, of near-inertial internal waves to depths of several hundred meters; 3) horizontal wavelengths of near-inertial waves ranging up to hundreds of km; and 4) currents at 3000-m depth coherent with geostrophic currents determined from a bottom pressure array and also coherent with the wind stress curl in period bands of 3-4 days and 15-60 days. Much of the analysis was carried out by a Ph.D. student, Hongbo Qi, as part of his Ph.D. dissertation. We also collaborated with other Ocean Storms investigators.

LIST OF PUBLICATIONS

D'Asaro, E. A., C. C. Eriksen, M. D. Levine, P. Niiler, C. A. Paulson and P. V. Meurs, 1995: Upper ocean inertial currents forced by a strong storm I: Data and comparisons with linear theory. J. Phys. Oceanogr. (accepted for publication).

Niiler, P. P., J. Filloux, W. T. Liu, R. M. Samelson, J. D. Paduan and C. A. Paulson, 1993: Wind forced variability of the deep Eastern North Pacific: Observations of seafloor pressure and abyssal currents. J. Geophys. Res. 98, 22589-22602.

Qi, H., R. A. de Szoeke, C. A. Paulson and C. C. Eriksen, 1995: The structure of near-inertial waves during Ocean Storms. J. Phys. Oceanogr. (accepted for publication).

Qi, H., R. A. de Szoeke and C. A. Paulson, 1995: Propagation of near-inertial waves during Ocean Storms. J. Geophys. Res. (to be submitted).